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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/434,404	11/05/1999	ATSUSHI MATSUMOTO	862.3194	3919

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EXAMINER

NGUYEN, MADELEINE ANH VINH

ART UNIT

PAPER NUMBER

2622

DATE MAILED: 02/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/434,404

Applicant(s)

MATSUMOTO ET AL.

Examiner

Madeleine AV Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 18-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4, 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I (claims 1-17) in Paper No. 8 is acknowledged. The traversal is on the ground(s) that the inventions of group I and II are sufficiently closely related to justify that they be examined together and that such examination will not significantly burden the Office but will in the long run actually reduce the overall burden on the Examiner. This is not found persuasive because, as stated in the last office action, the inventions are distinct and have acquired a separate status in the art as shown by their different classification.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amano (US Patent No. 6,100,996).

Concerning claims 1 and 12, Amano et al discloses an image processing system (Fig.2) having a host device (3000) and an image output unit (1000) comprising generation means (18) for generating a bitmap image on the basis of inputted object data; hold means (13, 19) for

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holding attribute information in correspondence with each pixel of a bitmap image generated by the generation means; dither matrix processing means (200) for converting the bitmap image generated by the generation means into data capable of being processed by an image output unit; and changing means (200) for changing the contents of processing in the dither matrix means on the basis of the attribute information held in the hold means (Figs.2, 4, 7, 17, 23; Abstract; col. 11, line 22 – col. 15, line 50).

Amano does not specifically teach that the dither matrix change processing means is a conversion means and a changing means. However, Amano teaches a program for the dither matrix change processing is a portion of the control program 200. The dither matrix is a matrix that uses a dither method for generating output information (binarized image) from print information sent from the host computer 3000 (col. 13, lines 3-17). The dither matrix has only to be changed according to each image area such as character area, graphic area, bitmap image area and the dither matrix change processing has only to be started when the image area is changed in the binarization process of the extended image (col. 14, lines 30-54). It would have been obvious to one skilled in the art at the time the invention was made to consider the dither matrix processing is a conversion means since it converts the bitmap image data into print data for printing and the dither matrix change processing is a switch means since it changes the dither matrix according to the print information indicating the type of image area such as character area, graphic area, bitmap image area.

Concerning claims 2-10, Amano further teaches that the holding means stores attribute information which is arranged for each pixel corresponding to a two-dimensional coordinate position of the bitmap image; the holding means embeds the attribute information into bits of a

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part of each pixel data; the attribute information contains information representing whether object data corresponding thereto has the form of bitmap data; the dither matrix processing means including processing for converting a bitmap image into binary data using a dither matrix, and the dither matrix change processing changes the dither matrix on the basis of the attribute information; the generation means generates a bitmap image based on RGB color space, the dither matrix processing means converting each pixel data of the bitmap image into pixels data represented by YMCK color space; the attribute information is configured by a plurality of bits, wherein each bit of the attribute information represents an independent attribute; the object data is represented by a page descriptive language (col. 3, lines 7-60; col. 9, lines 23-39; col. 11, line 22 – col. 15, line 50; col. 19, line 55 – col. 20, line 6).

Concerning claim 11, Amano et al discloses a storage medium (13, Fig.2) for storing a control program (200) for image processing wherein said control program comprising program codes as means discussed in claims 1, 12 above.

Concerning claims 13-16, Amano further teaches that the attribute information has information hierarchically wherein there are one or more attribute information of low order concept which is subordinate to that of high order concept; the attribute is a monochrome attribute or a color attribute; the attribute information indicating whether object data corresponding thereto is a character attribute or any attribute other than characters; the attribute information includes single bit and a plurality of bit strings (col. 9, lines 23-39; col. 11, line 22 – col. 15, line 50).

Claim 17 is method claim of apparatus claim 1 above. Claim 17 is rejected for the same rationales set forth in claim 1.

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Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Damon (US Patent No. 5,751,470) discloses a method for enhanced print quality on print engines.

b. Nakahara (US Patent No. 6,021,217) teaches an image processing method and printer for subjecting multilevel input image data to multilevel dither processing so as to convert them into image data having a smaller number of gradients.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Madeleine AV Nguyen whose telephone number is 703 305-4860. The examiner can normally be reached on 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on 703 305-4712. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872-9314 for regular communications and 703 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-4700.



Madeleine AV Nguyen
Primary Examiner
Art Unit 2622

AV
February 5, 2003